

# Chun-Hsiang Chan

SPATIAL DATA SCIENTIST • PH.D.

No. 250, Wu-Hsing Street, Taipei 110, Taiwan (Republic of China)

☎ (+886) 928-639-838

| ✉ d04228002@ntu.edu.tw

| 🏠 toodou.github.io

| 📱 toodou

| 🌐

CHUN-HSIANG CHAN

*"I always aim to overcome my limitations."*

## Education

### National Taiwan University (NTU)

Taipei, Taiwan

PH.D. IN GEOGRAPHY

Sep. 2015 - Jul. 2021

- **GPA:** 4.12/4.3 (76)
- Applied spatiotemporal data analysis to unveil the global airline alliance market with 50+ million of flight schedule data.
- Leveraged worldwide flight schedule data with complex network analysis to characterize the aviation market structure of global airline alliances.

### Shih Chien University (USC)

Taipei, Taiwan

M.S., DEPARTMENT OF FOOD SCIENCE, NUTRITION, AND NUTRACEUTICAL BIOTECHNOLOGY

Sep. 2018 - 2020

- **GPA:** 4.0/4.0 (30)
- Revealed the critical physicochemical parameters with semi-gelatinized high amylose maize starch for quantifying slowly digestible starch and resistant starch mechanism during ultrasonication via machine learning (ML) techniques.

### National Taiwan University (NTU)

Taipei, Taiwan

M.S., DEPARTMENT OF GEOGRAPHY

Jan. 2013 - 2015

- **GPA:** 3.75/4.3 (31)
- - Identified seismic precursors with massive electromagnetic processing and frequency domain analysis to spatiotemporally predict the epicenter (24%) and occurrence time (68%) of seismic events one week before from 2013 to 2014 (magnitude > 4).

### National Taipei University of Education (NTUE)

Taipei, Taiwan

B.Soc.Sci., DEPARTMENT OF SOCIAL AND REGIONAL DEVELOPMENT

Sep. 2008 - 2012

- **GPA:** 3.79/4.3 (174)
- Determined debris-flow critical rainfall line for disaster prevention through ML techniques (FCGA, k-means clustering, and support vector machine) with 5 years of rainfall data and 21 geological types data.

## Experience

### Department of Radiology, School of Medicine, Taipei Medical University

Taipei, Taiwan

POSTDOCTORAL RESEARCH / DEPARTMENT OF RADIOLOGY, TAIPEI MUNICIPAL WANFANG HOSPITAL, TAIPEI MEDICAL UNIVERSITY

2021 - Present

- Evaluated the 3D trabecular microstructure parameters to reveal the relationship between areal BMD dual-energy X-ray Absorptiometry and volumetric BMD from QCT.
- Investigated the vertebral fracture assessment problems with a 2D plain-film radiograph and different 3D CT grading methods (conventional, consensus, and global search).
- Developed a 100% accuracy and rapid automated bone mineral density (BMD) report generator to improve efficiency for the report production.

### Institute of Sociology, Academia Sinica

Taipei, Taiwan

DATA SCIENTIST

2019 - Present

- Utilized complex analysis techniques to investigate the social network formulation through quantitative and qualitative approaches.
- Conducted spatiotemporal statistical analyses (SaTScan & LISA) to reveal the preferred locations of multi-religious landscapes with 400-year cultivation data in Taipei city.
- Applied Louvain community detection and ML techniques (PCA, clustering, and hierarchical clustering) to demystify the association between pilgrimage network and religious development history.

## School of Journalism and Communication, The Chinese University of Hong Kong

Hong Kong, China

DATA SCIENTIST / A JOINT BUSINESS PLANNING ON SOCIAL MEDIA MARKETING

2019 - Present

- Collected fine-dining brand's Facebook engagement data to demystify the pandemic impact on social media behavior (2019 to 2021).
- Applied ML techniques and time-series analysis to predict the reservation trend.

## Department of Geography, NTU

Taipei, Taiwan

RESEARCH ASSISTANT & TEACHER ASSISTANT / GEOSPATIAL COMPUTATIONAL SCIENCE LABORATORY

2019 - 2021

- Timely estimated the global exposure risk mobile app for direct and transfer air passengers to meet WHO healthcare goals and traveler needs in the COVID-19 pandemic.
- Demystified the role of transfer activities in cross-province transmission after Wuhan city lockdown by web crawling 1+ million railway schedule data during the COVID-19 pandemic.
- Utilized survival analysis and community detection for H1N1 global disease transmission with 85+ million global flight schedules.

## Department of Geography, NTU

Taipei, Taiwan

RESEARCH ASSISTANT & TEACHER ASSISTANT / REMOTE SENSING AND SPATIAL KNOWLEDGE LABORATORY

2013 - 2021

- Designed an automated low-frequency electromagnetic signal processing and pattern recognition system.
- Applied ML techniques in seismic precursor analysis and automated vertical stratum structure recognition.

## CyberSecurity Technology Institute, Institute for Information Industry (III)

Taipei, Taiwan

DATA SCIENTIST ENGINEER / ANALYTICAL INTELLIGENCE SECTION, ARTIFICIAL INTELLIGENT RESEARCH AND

2017 - 2019

DEVELOPMENT CENTER

- Processed air pollution data to identify the spatiotemporal causal relationship between stationary emission sources and ambient air quality.
- Developed a real-time and open-source cybersecurity monitoring system with Elasticsearch, Logstash, and Kibana (ELK), which analyzed the suspicious packets.
- Implemented a generative adversarial network (GAN) model to detect malicious behaviors with a 250 GB malware dataset.

## Department of Social and Regional Development, NTUE

Taipei, Taiwan

RESEARCH ASSISTANT & TEACHER ASSISTANT / DEBRIS-FLOW DISASTER PREVENTION LABORATORY

2013 - 2016

- Leveraged social media advertising to promote crowd-sourcing debris-flow disaster platform and mobile app.
- Adopted several spatiotemporal hydrological analyses to timely characterize debris-flow disasters to informed experts and public users on a website and mobile app.

## National Science and Technology Center for Disaster Reduction (NCDR)

Taipei, Taiwan

RESEARCH INTERN / SLOPELAND DIVISION

2011 - 2011

- Conducted spatial statistical methods to reveal the hidden debris flow and landslide areas from massive high-resolution remote-sensing images.

## Department of Chemistry, NTU

Taipei, Taiwan

PROJECT STUDENT / JTC ORGANOMETALLIC RESEARCH LABORATORY

2010 - 2012

- Synthesized and characterized - from ligands to complexes [(o-C<sub>5</sub>H<sub>4</sub>N)C(CH<sub>3</sub>)(R<sub>1</sub>)NR<sub>2</sub>]AlMe<sub>2</sub>
- Characterized organometallic precursors by NMR techniques and X-Ray crystallography showing distorted tetrahedral structures.
- Catalyzed ring-opening polymerization of  $\epsilon$ -caprolactone with the activities and the *M<sub>n</sub>* values.
- Displayed the electronic and steric properties of distinct ligand influences toward molecular weight and PDI values.

## Invited Talks

Nov., 2021 **Invited Speaker**, The Roles of Spatial Analysis During the COVID-19 Pandemic

Chinese Culture  
University

Jan., 2020 **Invited Speaker**, Characterizing Major Airline Alliances: A Network Analysis

Kyoto University

Jan., 2020 **Invited Speaker**, A Social Network Approach to Detect the Characteristics of Fake News

Institute for Information  
Industry

Feb., 2019 **Keynote Speaker**, 2019 Present Sociology under Big Data

Academia Sinica

Sep., 2014 **Keynote Speaker**, Define an Expectation for Your University Life

NTUE

Apr., 2014 **Keynote Speaker**, 2014 Disaster Prevention and Warning Application in APP Competition

TICC, Taipei

## Thesis

2021	<b>Ph.D. Dissertation</b> , Characterizing Major Airline Alliances: A Network Analysis. <i>Department of Geography, National Taiwan University</i>	Taipei, Taiwan
2020	<b>Master Thesis</b> , Effects of Ultrasonic Treatment on Physical Properties and <i>in vitro</i> Digestibility of High Amylose Maize Starch. <i>Department of Food Science, Nutrition, and Nutraceuical Biotechnology, Shih Chien University</i>	Taipei, Taiwan
2015	<b>Master Thesis</b> , Applying Ultra Low Frequency Remote Sensing Techniques in the Earthquake Precursor Analysis —Using Taiwan as an Example. <i>Department of Geography, National Taiwan University</i>	Taipei, Taiwan
2011	<b>Bachelor Thesis</b> , Ring-Opening Polymerization of $\epsilon$ -caprolactone Using Organoaluminum Complexes Bearing Amido-pyridine Bidentate Ligand. <i>Department of Chemistry, National Taiwan University</i>	Taipei, Taiwan
2011	<b>Bachelor Thesis</b> , Establishing Debris-Flow Cluster and Modified Critical Rainfall Line. <i>Department of Social and Regional Development, National Taipei University of Education</i>	Taipei, Taiwan

## Teaching Experience

### ASSIST. PROF. | TAMKANG UNIVERSITY

2021	<b>Advanced C Programming and It's Applications</b> , Department of Geography (Fall'21)	College of Engineering
------	---	------------------------

### TA | NATIONAL TAIWAN UNIVERSITY

2021	<b>Network Data Analysis and Models</b> , Department of Geography (Spring'21)	College of Science
2018	<b>Computer Programming</b> , Department of Geography (Spring'18)	College of Science
2017-2018	<b>Russian (I)</b> , Department of Foreign Languages and Literatures (Fall'17 to Spring'18)	College of Liberal Arts
2017-2018	<b>Russian (III)</b> , Department of Foreign Languages and Literatures (Fall'17 to Spring'18)	College of Liberal Arts
2017	<b>Russian (II)</b> , Department of Foreign Languages and Literatures (Spring'17)	College of Liberal Arts
2017	<b>Russian Listening Training</b> , Department of Foreign Languages and Literatures (Spring'17)	College of Liberal Arts
2016	<b>Medical Database Systems</b> , Institute of Biomedical Engineering (Fall'16)	College of Medicine
2014	<b>Special Topics in Spatial Information</b> , Department of Geography (Spring'14)	College of Science
2014	<b>Remotely Sensed Land Monitoring</b> , Department of Geography (Spring'14)	College of Science
2013	<b>Spatial Information Research Methods</b> , Department of Geography (Fall'13)	College of Science
2013	<b>Applying Spatial Information in Tourism Recreation</b> , Department of Geography (Fall'13)	College of Science

### TA | NATIONAL TAIPEI UNIVERSITY OF EDUCATION

2015 & 2016	<b>Geographic Information System</b> , Department of Social and Regional Development (Spring'15 & '16)	College of Education
-------------	--	----------------------

### TA | NATIONAL TAIWAN NORMAL UNIVERSITY

2018	<b>Data Mining</b> , Department of Computer Science and Information Engineering (Fall'18)	College of Science
------	---	--------------------

## Academic Service

SCI	<b>Reviewer</b> , International Journal of Health Geographics	Journal Article
SCI	<b>Reviewer</b> , Plos One	Journal Article
EI	<b>Reviewer</b> , International Journal of Web Based Communities	Journal Article

## Honors & Awards

---

### RESEARCH

2020	<b>The Second Prize</b> , 2020 Canada - Taiwan Bilateral Conference on Nutrition, Health, Benefit and Innovative Processing of Whole Grains and Pulses	<i>Taichung, Taiwan</i>
2019	<b>The Third Prize</b> , 2019 International Conference on Grain Industry Development and Annual Meeting of Taiwan Grain Industry Association (TGIA)	<i>Taichung, Taiwan</i>
2018	<b>Young Scientist Award</b> , 2nd CiC Students' Workshop: Driving Sustainable Development	<i>Tsukuba, Japan</i>
2014	<b>The First Prize</b> , The 15th Cross-Strait Symposium on Environmental Resources and Ecological Conservation	<i>Zhangjiajie, China</i>
2013	<b>The Second Prize</b> , The 14th Cross-Strait Symposium on Environmental Resources and Ecological Conservation	<i>Kunming, China</i>
2011	<b>The First Prize</b> , The 12th Cross-Strait Symposium on Environmental Resources and Ecological Conservation	<i>Nanchang, China</i>
2011	<b>Selected (Highest)</b> , Undergraduate Student Thesis Presentation in Class of 2012	<i>NTUE, Taiwan</i>

### COMPETITION

2014	<b>Third Prize</b> , 2014 Disaster Prevention and Warning Application in APP Competition	<i>Taipei, Taiwan</i>
------	--	-----------------------

### SCHOLARSHIP AND GRANTS

2021	<b>Journal Paper Publication Grants for Doctoral Students at Dept. of Geography</b> ,	<i>NTU, Taiwan</i>
2020	<b>NetSci-X 2020 Travel Grants</b> , NetSci-X 2020, Waseda University	<i>Japan</i>
2020	<b>College of Science Travel Grants for International Conference</b> , College of Science	<i>NTU, Taiwan</i>
2020	<b>Honorary Membership</b> , The Phi Tau Phi Scholastic Honor Society of the Republic of China	<i>Taipei, Taiwan</i>
2020	<b>Academic Excellence Award</b> , Department of Food Science, Nutrition, and Nutraceutical Biotechnology	<i>USC, Taiwan</i>
2019-2020	<b>Grant for Ph.D. Candidates in the Humanities and Social Sciences to Write Doctoral Thesis</b> ,	<i>MOST, Taiwan</i>
2019	<b>College of Science Travel Grants for International Conference</b> , College of Science	<i>NTU, Taiwan</i>
2018-2019	<b>Presidential Award</b> , Department of Food Science, Nutrition, and Nutraceutical Biotechnology(Fall'18, Spring'19)	<i>USC, Taiwan</i>
2018	<b>Travel Grants for 2018 Tsukuba Global Science Week</b> , NTU and Tsukuba University	<i>Taiwan &amp; Japan</i>
2017-2018	<b>Graduate Student Representative of College of Science</b> , College of Science	<i>NTU, Taiwan</i>
2014	<b>Budget Supplement for Graduated Student Attending International Conference</b> ,	<i>MOST, Taiwan</i>
2010-2011	<b>Presidential Award</b> , Department of Social and Regional Development (Spring'10, Fall'11)	<i>NTUE, Taiwan</i>

## Certifications, Skills & Interests

---

### LANGUAGES

**Chinese:** Native; **English:** Fluent; **Russian:** Conversant; **Japanese:** Beginning; **Spanish:** Beginning

### CERTIFICATIONS

Emergency Medical Technician: Level 1 (EMT1)  
Certified Scanning Electron Microscopy Operator | Certified X-ray Diffraction Operator  
Teaching Certificate for Elementary School | HACCP Quality Control (Primary & Advanced)  
Tour Guide of General Examination and Tour Leader of General Examination  
TBSA Certificate of Business Planning Proficiency (Elementary)  
National Volleyball Referee (C) | Certified lifeguard and Certified Swimming Coach (Level B & C)

### TECHNICAL SKILLS

**Computer Science:** Python, Matlab, R, C, C#, JavaScript, jQuery, jQueryUI, Android Development, HTML, MySQL, Nodejs, AngularJS, MongoDB, Elasticsearch, Spark, Facebook APIs and Twitter APIs  
**Geography:** GIS (ArcGIS, QGIS, Super GIS), Spatial Statistics, Spatial Database, Complex Network Analysis, Gephi  
**Physics:** Signal Processing (in time sequence and frequency) and Electromagnetic Analysis  
**Food Chemistry:** Starch Science, Resistant Starch, Slowly Digestible Starch, *in vitro* Digestibility, SEM, XRD and HPSEC  
**Chemistry:** Organometallic synthesis, NMR, IR, HPLC, ESI-MASS and pH meter  
**Design:** Illustrator, Photoshop, Dreamweaver and Google SketchUp

## Research Projects

### MINISTRY OF SCIENCE AND TECHNOLOGY

2021-2023	<b>PostDoc</b> , Case control longitudinal study of Romosozumab vs. Denosozumab treatment for osteoporotic women in assessment of HRCT-based vertebral structural changes	Participant
2019-2021	<b>RA/ PM</b> , An Early Warning Framework for International Spread of Infectious Diseases -Assessing disease importation risk in Taiwan and East Asian regions	Participant
2019-2020	<b>PI/ Ph.D. Candidate</b> , Grant for Ph.D. Candidates in the Humanities and Social Sciences to Write Doctoral Thesis	Principal Investigator
2016-2017	<b>RA</b> , SlopeLand Disaster Risk Estimation for Mountain Region Community and Revegetation - Sediment Disaster Risk Evaluation and Adaptation Study in Isolated Community(I)	Participant
2015-2016	<b>RA</b> , Combine Crowd-Sourcing Disaster Information and Early Warning Technique for Real-time Interactive Disaster Information Platform - To Establish an Interactional Real-Time Debris-flow Disaster Information System and its extended (III)	Participant
2015-2016	<b>RA</b> , SlopeLand Disaster Prevention System for Local Community - Combine Rainfall Information for Debris-flow Potential Region and Application (I)	Participant
2014-2015	<b>RA</b> , Combine Crowd-Sourcing Disaster Information and Early Warning Technique for Real-time Interactive Disaster Information Platform - To Establish an Interactional Real-Time Debris-flow Disaster Information System and its extended (II)	Participant
2013-2014	<b>RA</b> , Combine Crowd-Sourcing Disaster Information and Early Warning Technique for Real-time Interactive Disaster Information Platform - To Establish an Interactional Real-Time Debris-flow Disaster Information System and its extended (I)	Participant

### NATIONAL TAIPEI UNIVERSITY OF EDUCATION

2010	<b>RA</b> , Establishment and Promotion of Virtual Reality Education Platform for Ocean Environment Education	Participant
------	---	-------------

### MINISTRY OF EDUCATION

2016	<b>PM</b> , The 14th International Senior High Schools Intelligent Ironman Creativity Contest	Participant
2013	<b>PM</b> , The 11th International Senior High Schools Intelligent Ironman Creativity Contest	Participant
2012	<b>PM</b> , The 10th International Senior High Schools Intelligent Ironman Creativity Contest	Participant

## Selected Publications

### Peer-Reviewed Journal Papers

- [1] **Chun-Hsiang Chan**, Ri-Gui Wu, Yi-Yuan Shao (Under Review). Physicochemical properties, *in vitro* digestibility, and estimated glycemic index of Ningbo rice cakes with partial resistant starch substitutions. *Food Chemistry*. (SCI IF: 7.514; Q1 7/144 in Food Science & Technology)
- [2] **Chun-Hsiang Chan**, Wen-Chi Huang, Yi-Chien Lu, Hsing-Fen Hsiao, and Wing P. Chan (2021). BatchBMD as an Efficient and Accurate Dual-Energy X-ray Absorptiometry Report Generator. *Diagnostics*. Vol.11(12), 2403. <https://doi.org/10.3390/diagnostics11122403> (SCI IF: 3.706; Q2 45/167 in Medicine, General, and Internal)
- [3] **Chun-Hsiang Chan**, Tzai-Hung Wen (2021). Revisiting the Effects of High-speed Railway Transfers in the Early COVID-19 Cross-province Transmission in China. *International Journal of Environmental Research and Public Health*. Vol.18(12), 6394. <https://doi.org/10.3390/ijerph18126394> (SSCI IF: 3.390; Q1 32/171 in Public, Environmental & Occupational Health)
- [4] **Chun-Hsiang Chan**, Ri-Gui Wu, Yi-Yuan Shao (2021). The Effects of Ultrasonic Treatment on Physicochemical Properties and *in vitro* Digestibility of Semigelatinized High Amylose Maize Starch. *Food Hydrocolloids*. Vol.119, 106831. <https://doi.org/10.1016/j.foodhyd.2021.106831> (SCI IF: 9.147; Q1 5/74 in Applied Chemistry; Q1 5/144 in Food Science & Technology)
- [5] Wei-Hsian Chi, Fei-Ying Kuo, Chang-Hui Chi, Shi-Chiang Lin, **Chun-Hsiang Chan** (2021). Spatial-temporal Analysis of Pilgrimage Network of Mazu-temples in Yunlin and Chiayi County: A Study on Geographical Distribution of Pilgrimage Group. *Journal of Geographical Science*. Vol.98, 45-82. [https://doi.org/10.6161/jgs.202104\\_\(98\).0003](https://doi.org/10.6161/jgs.202104_(98).0003) (TSSCI)
- [6] **Chun-Hsiang Chan**, Tzu-How Chu, Jiun-Huei Protty Wu, Tzai-Hung Wen (2021). Spatially Characterizing Major Airline Alliances: A Network Analysis. *ISPRS International Journal of Geo-Information (IJGI)*. Vol.10(1), 38. <https://doi.org/10.3390/ijgi10010038> (SCI IF: 2.899; Q2 23/50 in Geography; Q2 76/162 in Computer Science)
- [7] Yuan-Fang Tsai, **Chun-Hsiang Chan**, Keng-Han Lin, Wen-Ray Su, Jinn-Chyi Chen (2017, Jul). New debris flow critical rainfall line setting via cluster analysis and support vector machine after the Chi-Chi huge earthquake. *2017 13th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD)* (EI). 970-975.

### Peer-Reviewed Conference Papers

- [1] **Chun-Hsiang Chan**, Shih-Chia Wu (Jul, 2022) The impact of marketing communication strategies on online consumer-brand community engagement during COVID-19 pandemic. *29th Annual BledCom Conference*, Bled, Slovenia.

- [2] **Chun-Hsiang Chan**, Wing P. Chan (Mar, 2022) The Hollowed Trabecular Phenomenon —Demystifying the Trabecular Aging Process in Healthy Older Adults Using Multidimensional Approaches. *WCO-IOF-ESCEO Virtual Congress 2022*, Berlin, Germany.
- [3] **Chun-Hsiang Chan**, Tzai-Hung Wen (Oct, 2021). Timely exposure risk at airports app for air travelers —using the COVID-19 pandemic as an example. *2021 Asian Seminar in Regional Science —Regional Science in Post-Pandemic Era*, Taichung, Taiwan.
- [4] **Chun-Hsiang Chan**, Shih-Chia Wu (Jul, 2021) Reversible or Irreversible User Engagement Behavior Changes During COVID-19 Pandemic: a Case Study of a Top Restaurant Brand in Taiwan. *28th Annual BledCom Conference*, Bled, Slovenia.
- [5] **Chun-Hsiang Chan**, Ri-Gui Wu, Yi-Yuan Shao (Sep, 2020) Ultrasonic Treatment on Starch Granule Morphology and Physicochemical Properties of High Amylose Maize Starch. *2020 Canada - Taiwan Bilateral Conference on Nutrition, Health, Benefit and Innovative Processing of Whole Grains and Pulses*, Taichung, Taiwan.
- [6] 吳優、詹竣翔、邵貽沅 (2020 年 6 月) 探討超音波處理對半糊化之糯性玉米澱粉物性和消化性的影響。台灣農業化學會第 58 次會員大會。臺北，臺灣。
- [7] 吳優、詹竣翔、邵貽沅 (2020 年 6 月) 探討去支鏈、超音波和回凝處理對澱粉物性和消化性的影響。台灣農業化學會第 58 次會員大會。臺北，臺灣。
- [8] **Chun-Hsiang Chan**, Tzai-Hung Wen, Tzu-How Chu, Jiun-Huei Protty (Jan, 2020) Characterizing the Roles of Nodes in the Global Airline Alliance Network: Considering Structure Equivalence and Geographic Proximity. *NetSci-X 2020*, Tokyo, Japan.
- [9] **Chun-Hsiang Chan**, Ri-Gui Wu, Yi-Yuan Shao (Sep, 2019) Effect of Pregelatinized Temperature on the Morphology and Resistent Starch of High Amylose Corn Starch *2019 International Conference on Grain Industry Development and Annual Meeting of Taiwan Grain Industry Association (TGIA)*, Taichung, Taiwan.
- [10] Ri-Gui Wu, **Chun-Hsiang Chan**, Yi-Yuan Shao (Sep, 2019) Quality of Ningbo Rice Cake with Debranched Starch. *2019 International Conference on Grain Industry Development and Annual Meeting of Taiwan Grain Industry Association (TGIA)*, Taichung, Taiwan.
- [11] **Chun-Hsiang Chan**, Tzu-How Chu, Jehn-Yih Juang, Ching-Hao Mao, Shin-Ying Huang (Apr, 2019) Causal Relationship on Sulfur Dioxide Between Stationary Emission Source and Ambient Air Quality: a Data-driven Approach. *EGU General Assembly 2019*, Vienna, Austria.
- [12] **Chun-Hsiang Chan**, Tzu-How Chu, Jiun-Huei Protty Wu (Apr, 2017) Statistical Analysis of Very Low Frequency Electromagnetic Signal for Earthquake Precursor Anomalies. *EGU General Assembly 2017*, Vienna, Austria.
- [13] Yuan-Fan Tsai, **Chun-Hsiang Chan**, Yuan-Ning Chan (Jul, 2016) To Establish an Integrative Information System for Debris-Flow Disaster. *Asian Conference on Civil, Material and Environmental Sciences*, Hokkaido, Japan.
- [14] Yuan-Fan Tsai, **Chun-Hsiang Chan**, Yi-Ting Huang, Jie-Ming Guan, Cheng-Hsin Chang (Jun, 2016) Establishing Optimal YouBike Route Planning for Cuisine in Smart Phone Application. *Hong Kong International Conference on Social Science 2016*, Hong Kong.
- [15] 蔡元芳、詹媛甯、周煥傑、黃竹頤、林庚翰、詹竣翔 (2015 年 10 月)。跨平台整合之防災即時資訊網建置。第十九屆海峽兩岸水利科技交流研討會。上海，中國。
- [16] **Chun-Hsiang Chan**, Tzu-How Chu, Jiun-Huei Protty Wu (Jun, 2015) Earthquake Precursor Detection for Epicenter Spatial Analysis and Estimation. *International Conference on Earth Observations and Societal Impacts 2015 (ICEO&SI 2015)*, Kaohsiung, Taiwan.
- [17] Wen-Xiang Wang, Lan-Xiang Wang, Ting Jin, Li-Ting An, Hui-Ying Wang, Tzu-How Chu, **Chun-Hsiang Chan**, Rei-Yuan Wang (Jun, 2015) The Earthquake Precursor Detecting Method Applied in the 2011 Tohoku Earthquake. *International Workshop on Earthquake Preparation Process 2015 - Observation, Validation, Modeling, Forecasting - (IWEP2)*, Chiba, Japan.
- [18] Yuan-Fan Tsai, **Chun-Hsiang Chan** (Jun, 2015) To Establish an Interactional Real-Time Debris-Flow Disaster Information System and Extension. *6th International Conference on Debris-Flow Hazards Mitigation: Mechanics, Prediction and Assessment (DFHM6)*, Tsukuba, Japan.
- [19] 管潔明、黃翊婷、蔡元芳、詹竣翔 (2015 年 5 月) 微笑單車安全路線規劃應用於智慧型手持裝置美食 APP。第 19 屆臺灣地理國際學術研討會。臺北，臺灣。
- [20] 林庚翰、謝青恩、吳昊宸、蔡元芳、詹竣翔 (2015 年 5 月) MFAs 慢跑社群手持裝置 APP 之開發。第 19 屆臺灣地理國際學術研討會。臺北，臺灣。
- [21] 王瑞麟、蔡元芳、詹竣翔 (2015 年 5 月) 自行車停車空間規劃模式之建置-以台北市大安區為例。第 19 屆臺灣地理國際學術研討會。臺北，臺灣。
- [22] Yuan-Fan Tsai, **Chun-Hsiang Chan**, Chu-Yi Huang, Huan-Chieh Chou (Apr, 2015) Crowdsourcing Oriented Ontology Applies in Instant Debris-flow Disaster Information Platform in Web and Smart Phone Application. *EGU General Assembly 2015*, Vienna, Austria.
- [23] **Chun-Hsiang Chan**, Tzu-How Chu, Jiun-Huei Protty Wu, Ruei-Yuan Wang, Yi-Shiang Shiu (Jul, 2014) Establishing VLF Electromagnetic Monitoring System for Earthquake Precursors Analysis and Application. *The 15th Crossstrait Symposium on Environment, Resource and Ecological Conservation*, Zhangjiajie, China.
- [24] Tzu-How Chu, Ruei-Yuan Wang, **Chun-Hsiang Chan**, Yi-Shiang Shiu (May, 2014) The Study on the Prediction of Earthquake Precursors in Taiwan by Using the Monitoring Systems of Low-Frequency Electromagnetic Wave. *The 9th Taipei International Digital Earth Symposium*, Taipei, Taiwan.
- [25] **Chun-Hsiang Chan**, Tzu-How Chu, Jiun-Huei Protty Wu (Apr, 2014) VLF Electromagnetic Signal Analysis in Seismic Epicenter Application. *2014 Association of American Geographers' Annual Meeting*, Tampa, Florida, United States.
- [26] Yuan-Fan Tsai, **Chun-Hsiang Chan**, Yu-Qian Zhang, Wan-Jou Lu, Chi-Chen Yeh (Mar, 2014) Taipei City Marketing Application in Smart Phone Application Operation and Design. *The 2nd International Symposium on Education, Psychology, Society and Tourism (ISEPST 2014)*, Tokyo, Japan.
- [27] **Chun-Hsiang Chan**, Yuan-Fan Tsai (Jul, 2013) Allocating reforestation areas for variation of soil erosion maximization: MCLP formulation and pre-emptive goal programming. *The 14th Cross-strait Symposium on Environment, Resource and Ecological Conservation*, Kunming, Yunnan, China.
- [28] Yuan-Fan Tsai, Yu-Lun Cheng, **Chun-Hsiang Chan** (Jun, 2012) Setting up the Critical Rainfall Line For Debris-flow Via Support Vector Machines. *The International Conference on Earth Observations and Societal Impacts 2012 (ICEO-SI 2012)*, Taipei, Taiwan.
- [29] **Chun-Hsiang Chan**, Yuan-Fan Tsai (Jul, 2011) Establishing Debris-flow Cluster and Modified Critical Line. *The 12th Cross-strait Symposium on Environment, Resource and Ecological Conservation*, Nanchang, Jiangxi, China.

## Books, Reports, and News

- [1] **[Book]** 金威澄、李正哲、李冠儒、詹竣翔、江承頤、曾毓媛、王立宏、吳連哲、廖德融、劉柏賢、沈祥茵 (2021 年 11 月 17 日) 當代英雄從台灣出發-台大學生的俄羅斯與後蘇聯行旅 (Герои нашего времени - С Тайваня в Россию и постсоветское пространство)。中文：第 42-45 頁 & 第 138-143 頁。俄文：第 25-28 頁 & 第 87-91 頁。臺北市：櫻桃園文化出版有限公司。
- [2] **[Article]** 詹竣翔 (2021 年 7 月 2 日) 臺大地理系 2021 年楊楠子人文學術講座：人口動態的前沿研究暨地理職涯發展的交流。國立臺灣大學理學院院刊第 48 期：國際交流。臺北市：國立臺灣大學理學院。<https://bit.ly/3wsGSOH>
- [3] **[Report]** 詹竣翔、邵貽沅 (2021 年 4 月 15 日) 參加 2021 年 ICBC 國際研討會-線上會議報告。第 7-11 頁臺北市：中華穀類食品工業技術研究所。
- [4] **[News]** 溫在弘、詹竣翔 (2020 年 4 月 27 日) 10 大關鍵圖表掌握新冠肺炎產經衝擊。天下雜誌。<https://bit.ly/2PckaQF>
- [5] **[News]** 溫在弘、詹竣翔、郭飛鷹 (2020 年 4 月 6 日) 防堵疫情擴散台大研究團隊：生活圈防疫勝過封城。東森新聞。<https://bit.ly/35bTrWA>
- [6] **[News]** 溫在弘、詹竣翔 (2020 年 3 月 5 日) 【口罩下的人 #02】封城能擋疫情？台大教授算高鐵班次發現：周邊城市確診人數是其他城市的 1.5 倍。未來城市 | 天下雜誌。<https://bit.ly/33ym7bK>
- [7] **[News]** 朱子豪、詹竣翔 (2015 年 1 月 20 日) 測「超低頻電磁波」可預測地震？民視新聞。<https://bit.ly/3HHjzXg>